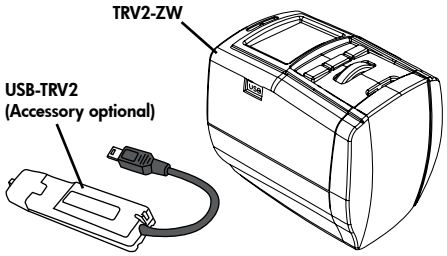
B.E.G. LUXOMAT® TRV2-ZW

Installation and operating instructions for B.E.G. – programmable energy-saving radiator thermostat LUXOMAT® TRV2-ZW

1. Part / Part No. / Accessories

LUXOMAT® Thermostat
TRV2-ZW: 92046

For accessories, refer to **www.luxomat.com/en-92046**



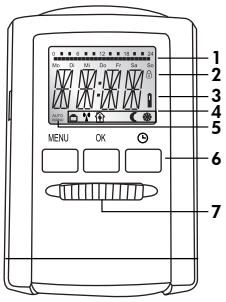
Scope of delivery (included in the box)
1 TRV2-ZW energy saving radiator thermostat
1 User manual
1 Connector
3 Adapters

Application as directed

With the TRV2-ZW energy-saving control, you have acquired a wirelessly connected radiator control designed to control temperatures in enclosed rooms and thus reduce heating energy consumption.
Please use the thermostat only for this purpose.

The TRV2-ZW programming port is intended ONLY for our USB-TRV2 (**Accessory: 92054**). **Never connect other devices with the programming port!**

2. Display and control elements



1 Heating times
2 Child lock active
3 Battery low
4.a Travel function active
4.b Wireless connection active
4.c Comfort temperature active
4.d Economy temperature active
4.e Window/freeze protection function active
5 AUTO or MANU mode active
6.a Button MENU – leads to the main menu (starting from regular display); within the menu one keypress leads to the previous level
6.b Button OK – confirmation of setting
6.c Button ⏲ – timer function
7 Selector wheel

3. Set up menu

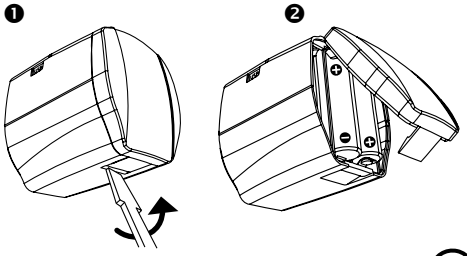
By pressing MENU you will arrive at the set up menu. Please choose one of the items with the selector wheel. With OK you can select one menu item and with the selection wheel they can be adjusted. The button OK confirms the setting. The button MENU leads to the previous level.

MODE	to select the mode AUTO = automatic mode MANU = manual mode PRAE = PRESENCE mode APRA = Automatic mode + additional presence detection
PROG	setting of time programme
TEMP	setting of comfort and economy temperature
ZEIT	setting of date and time
FENS	window function
RES	reset of the device to factory preset
ADAP	starting of a new adaptation to adjust the valve
URLA	travel function
INST	installation function
OFFS	adaptation of temperature to the room situation

4. Inserting / replacing batteries

Remove the battery cover where indicated using a screwdriver and pulling the cover off.

Then insert the batteries as shown in the illustration.



▶ Do not use rechargeable batteries! Ensure that the polarity is correct!

Attention:

- Never recharge batteries, danger of explosion!
- Do not short-circuit batteries!
- Do not disassemble batteries!
- Take low batteries out of the device immediately.
- Keep batteries away from extreme warming – danger of leakage!
- Do not apply used and new batteries together. If needed, clean the battery and the contacts before using them.
- Keep the batteries away from children.
- When getting in touch with battery acid instantly irrigate the affected parts with clear water and call a doctor.

5. Setting date and time

After inserting the batteries for the first time the date will flash on the display. Now, date and time can be set.

Set date with the selector wheel. Confirm with OK.
Set month with the selector wheel. Confirm with OK.
Set day with the selector wheel. Confirm with OK.
Set hour with the selector wheel. Confirm with OK.
Set minute with the selector wheel. Confirm with OK – That´s it.

On the display PREP will be shown. Now, the motor will completely move to the installation position in order to make the installation easier. As soon as TRV2-ZW is ready for installation INST will be shown on the display.

You can also set date and time via the menu item ZEIT later on. But in case of that, TRV2-ZW does not move to the installation position.

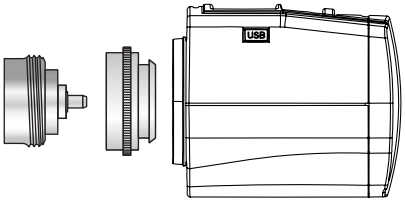
▶ In case of replacing batteries, the stored time programme will remain active. You should check the specified time to ensure that.

6. Creating the wireless connection

1. Initialise the device before it logs in for the first time. The menus may be navigated by using the adjusting wheel and function keys. You can navigate to the menu item RSET with MENU ▶ FUNK ▶ OK ▶ RSET and confirming with OK
2. The login procedure may now commence. To commence the login procedure, switch the MyControl to learning mode: ▶ ▶
   The learning procedure for the TRV2-ZW is also started in the next step. MENU ▶ FUNK ▶ OK ▶ LEARN ▶ OK
   A symbol representing the radiator control will be shown in the MyControl display when the learning procedure has been concluded.
3. Only the time for the repeater's cyclical query now needs to be set. This time also automatically determines the maximum period before the heating is switched on after movement has been detected. The options are: 3, 4 or 5 minutes. You may navigate to these settings via MENU ▶ OK ▶ FUNK ▶ Example 5 MI..... ▶ OK

7. Installation

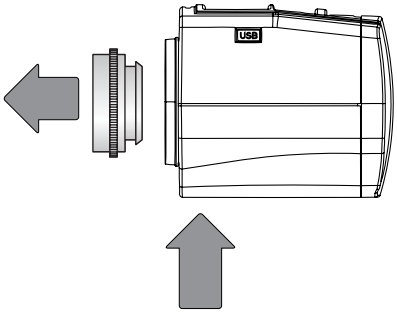
TRV2-ZW can be quickly and easily mounted on all common valves (see adapter table). It can be installed without grime and water spots because the heating circuit is not interrupted.



1. Turn the manual thermostat head up completely, loosen the fastening and pull the thermostat off of the valve.
2. Use an appropriate adapter, if required, and push it onto the valve.
3. Screw the connector on the valve or the adapter.
4. Now, you put TRV2-ZW on the connector until it noticeably clicks into place.

▶ In case of a **later installation** please switch in the menu to INST **before** you install the device. Herewith the installation is facilitated.

8. Dismounting



▶ In order to dismount TRV2-ZW press the releasing device to loosen the locking device. Now, pull the TRV2-ZW off of the valve.

9. Adaptation

Initial installation: Press the button OK until ADAP appears on the display so that TRV2-ZW will be able to start its adaptation. The device will adapt itself to the stroke of your valve body. To do this the valve will now be opened and closed several times to store the end points.
In some cases this process can take a few minutes. After successful adaptation it returns to normal mode.

▶ Should adaptation become necessary again, e.g. if your radiator does not cool down in the AUS position, please press in the menu the button ADAP until adaptation starts again.

▶ If the mistake E2 is shown on the display place TRV2-ZW onto the radiator valve and then take the batteries out for a short time in order to execute a reset.

10. Basic operating modes

MANU-mode
In the MANU-mode TRV2-ZW adjusts to the manually specified temperature.

AUTO-mode
In AUTO mode, he TRV2-ZW operates as a standalone unit (without motion detection) and switches between two temperatures depending on the settings made in the timer program:

comfort temperature (factory preset 21°C)
economy temperature (factory preset 16°C)

PRESENCE MODE
In presence mode, the TRV2-ZW will switch the heater to the set comfort temperature when it detects motion. Otherwise the temperature will remain at the previously set economy temperature.

AUTO-PRESENCE MODE
Auto-presence mode combines automatic mode with presence mode, i.e. fixed heating times may set during which the economy control switches the heating to the specified comfort temperature. When economy temperature is active, the unit will adjust the heating depending on its presence-detection, i.e. it will activate the heating if it senses any movement.

The heating and economy times can be specified via the adjustable time programme. It is possible to set 8 switch points (4 heating and 4 economy times) per day at the most. TRV2-ZW has the following factory preset:

Heating time:
Heating with comfort temperature
(factory preset: 1st heating time at 07:00)

Economy time:
lowering to economy temperature
(factory preset: 1st economy time at 22:00)

11. Setting heating and economy times

With TRV2-ZW it is possible to set 4 heating and 4 economy times per day – one for each day or one for a block of several days. TAG1 to TAG7 represent the weekdays from Monday to Sunday. Additionally, the corresponding days are shown as abbreviation below the menu bar on the display.

Block construction:
T1–5 = same programme from Monday to Friday
T1–6 = same programme from Monday to Saturday
T1–7 = same programme from Monday to Sunday

▶ For non-programmed days the factory preset remains active.

Setting of an individual programme:
Press MENU. Select the menu item with the selector wheel. Press OK.

TAG1 for Monday is shown on the display.

Select day/block with the selector wheel. Confirm with OK.

Set the beginning of the 1st heating time (symbol) with the selector wheel. Confirm with OK.

Set the beginning of the 1st economy time (symbol ◐) with the selector wheel. Confirm with OK.

Now, if desired, a 2nd, 3rd or 4th heating/economy time can be entered.

▶ If you do not want to set a further heating/economy time confirm "----" with OK.

The next day for programming is shown on the display.

▶ If you do not want to enter a further day, leave the menu with MENU. If the temperature is shown on the display the programming is finished.
▶ Within the blocks you can also overwrite single days with differing times.

12. Setting comfort and economy temperature

Press MENU. Select the menu item TEMP with the selector wheel. Confirm with OK. Set comfort temperature with the selector wheel. Confirm with OK. Set the economy temperature with the selector wheel. Confirm with OK.

Area AUS**:** 8°C, freeze protection function is active
Area EIN**:** valve is completely open

▶ **By the way:** Maximum energy saving can be obtained with an economy temperature which is about 5°C below the comfort temperature.

13. Manual operation

With the selector wheel an adaptation of the room temperature is possible at any time. In the AUTO-mode it remains active until the next switch point is reached. Now, the usual programme becomes active again.

14. Further functions

Timer function
The timer function is selected with the timer-button. With this function a user-defined temperature for a programmable period can be entered. This can be very useful in case of a party, for example. Press. First, the time for which the time programme has been deactivated is shown. Confirm with OK. Now, the desired temperature can be set. Confirm with OK.

Offset
If the perceived temperature significantly differs from the set thermostat temperature a temperature set up can be executed. Press MENU. Select the menu item OFFS with the selector wheel. Confirm with OK. The degree setting 0.0°C will flash on the display. Now, set up the desired adaptation for the temperature (from -5 up to +5°C) with the selector wheel. Confirm your entry with OK. The temperature display does not change!

Window function
If you open a window and consequently the temperature **drops significantly,** TRV2-ZW will automatically close the heating valve in order to save energy. The display will show ❄. Afterwards,
TRV2-ZW will resume normal operation. For the set up select FENSin the menu. Confirm with OK. First, the sensibility is selected with the selector wheel (HIGH = high sensibility, MID = medium sensibility (factory preset), LOW = low sensibility). Confirm with OK. Now, you enter the time (10 min. (factory preset) - 60 min.) for which the valve should remain closed. Confirm with OK.

Travel function
For the time you are absent you can select an individual temperature. After this period the originally defined programme becomes active again.
Press MENU. Select the menu item URLA. Confirm with OK (suitcase appears on the display). Select with the selector wheel the end of the travel function (= date of the recommencement of the regular heating times). Confirm with OK. Set the time and confirm with the button OK. The signal AUS appears on the display. Now set the temperature and confirm with OK. appears on the display. With MENU the function can be deactivated.

Child lock
You can lock TRV2-ZW to protect the device from unauthorized activation.
Press the buttons OK + at the same time for about 2 seconds until the signal appears on the display in order to lock the device. By using this button combination again the symbol disappears and you release the lock.

Heating pause – Closing the TRV2-ZW
Press MENU. Select the menu item MODE with the selector wheel. Confirm with OK. Select MANU and confirm with OK. Set the temperature on the display to AUS. The valve is now closed and will work without a time programme. The calcification protection function remains active once a week. After the heating pause you switch in the menu to the AUTO-mode and the personally set programme will be executed again.

Going back to factory preset / All reset
Press MENU. Select the menu item RES with the selector wheel. Confirm with OK. OK flashes, confirm with OK. TRV2-ZW is reset again. Now, proceed as described for the initial operation.
Freeze protection and calcification protection function are active automatically:

Freeze protection function
If the temperature drops below 6°C, TRV2-ZW opens the valve until the temperature again rises above 8°C. This prevents the radiators from freezing.

Calcification protection function
To prevent radiator valves from calcifying TRV2-ZW is submitted to a calcification protection programme once a week on Friday mornings.

LCD-Display Standby
Press MENU. Choose menue point "STBY" with the selector wheel. Confirm with OK and choose "ON/OFF" with the selector wheel. After a period of 30 seconds the LCD display switches into standby mode. By pressing any button the display will be reactivated (reset of standby mode by removing the battery). This will prolong battery life.

15. Logging the unit out of the system

Start MyControl unlearning mode

▶ ▶

The TRV2-ZW's unlearning mode will be activated.

MENU ▶ FUNK ▶ OK ▶ LEARN ▶ OK

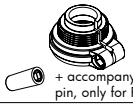
Alternatively, the unit may also be unlearned using X in the MyControl's submenu.

16. Cleaning and used devices

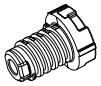
Cleaning
To clean the TRV2-ZW use only a dry or lightly wet cloth. Avoid chemical solvent – it will probably damage the device.

Used devices
Do not throw old devices and packaging into the household waste. They can be recycled. You receive further information at your local government or at WEEE directive coverage.

17. Adapters

Heimeier, Junkers Landys+Gyr, MNG, Honeywell, Braukmann thread-measure dimension of M 30x1,5	no adapter required
Danfoss RAV (accompanying pin must be plugged on the valve tapped)	 + accompanying pin, only for RAV!
Danfoss RA	
Danfoss RAVL	

18. Help

Problem	Cause	Solution
	Batteries do not have enough power.	Replace batteries.
flashing.	Wireless connection not working	Please check whether all wireless subscribers have been correctly connected.
Heating element does not warm up.	Is the boiler water temperature O.K.? Valve does not open, is it calcified after the summer pause / heating pause?	Adjust the temperature of the boiler water. Remove the TRV2-ZW, move the valve system back and forth per hand or with a tool.
Heating element does not cool down.	Valve does not close completely. It may be that the closing point of your valve seat has shifted.	Adapt again (see "Adapting") Move the valve stem several times by hand, it may be that adaptation is impossible because your valve is calcified or the seat no longer performs its function.
Pressure piece drops out. 	The pressure piece which is located on the bottom, can drop out due to a continuous thread.	Insert pressure piece. Press MENU. Choose ADAP in the menu items with the help of the adjusting wheel. Confirm with OK. Now the continuous thread rotates and fastens the pressure piece again.
E1	No adaptation possible.	Is the installation OK?
E2	TRV2-ZW is not installed to the heater. Valve stroke is too short.	Install TRV2-ZW to the heater. Open and close the valve several times manually or replace the batteries.
E3	Motor movement is not possible.	Does the valve stem move freely?

19. Technical data

Power supply:	Battery 2 x AA 1,5 V
Nominal voltage:	2,1 - 3,6 V
Transmission and reception frequency:	868,42 MHz
Transmission power:	<10 mW
Transmission and reception range (open area):	max. 100 m
Number of subscribers:	up to 80 (recommended)
Sensibility: Variable adjustable:	0,5°C, 1,0°C, 1,5°C and 2,0°C
Child lock included	
Dimensions	
Housing:	L 82 x W 55 x D 65 mm
Display:	W 29 x H 21 mm
Ambient temperature:	+5°C – +45°C